heat, and standardized. Eleven students were vaccinated at seven-day intervals, with three doses of 1,000,000,000 2,000,000,000, and 2,000,000,000 bacteria respectively. A slight leukocytosis followed, with malaise, headache, and fever. Occasionally signs were present suggesting meningeal irritation—severe headache, vomiting, vertigo, and photophobia. A local reaction with redness and swelling, and adenitis is the rule. The reaction lasts twenty-four hours. The immunity acquired was measured by agglutination and complement-fixation tests. The agglutinins increased after the repeated doses, one patient developing them to a liter of 1 to 1500 dilution of the serum. The highest complement-fixation was obtained in serum dilution of 1 to 250, at the end of the third week. All evidence points to the efficacy of the injection of dead meningococcus for prophylactic vaccination, as a measure which will confer considerable immunity in most cases against the infection of epidemic meningitis. The cases will be followed to determine the persistence and duration of the immunity.

Endemic Typhus Fever (Brill's Disease).—NICOLL, KRUMWIEDE, PRATT, and BULLOWA (*Jour. Amer. Med. Assoc.*, 1912, lix, 521) report a unique instance in the history of the endemic form of typhus fever (Brill's disease), in which the disease affected four members of the same family, two parents and their children. Clinically they represent types of the disease varying from the comparatively mild to an example of typhus fever such as is commonly seen in epidemics, thus giving, as it were, a clinical demonstration of the identity of the endemic and epidemic forms. The patients were Russian Hebrews of the poorer class and all were infested with head and body lice. Inoculation of the blood of one of the patients gave positive results in two guinea-pigs whose blood, in turn, injected into a monkey, caused a typical typhus temperature reaction. The authors have shown for the first time that it is possible to infect guinea-pigs with the disease, an additional point of similarity to the epidemic type.

Treponema Mucosum and Pyorrhea Alveolaris.—NOGUCHI (*Jour. Exper. Med.*, 1912, xvi, 194) isolated a small spirocheta from the pus of a case of pyorrhea alveolaris which is characterizeed chiefly by its capacity to produce mucin and a strong fetid odor. It is an anaërobe, and requires the presence of serum constituents for its growth. Subcutaneously it produces an acute inflammation and the tissues remain indurated a week or ten days. But there is no tendency to suppuration. The organism is easily differentiated. It has been named Treponema Mucosum and Noguchi holds it at least in part responsible for the strong fetid odor in the discharge from pyorrhea alveolaris.

Experimental Bronchopneumonias.—Following the experimental production of lobar pneumonia by intrabronchial insufflation of pure cultures of pneumococcus (Lamar and Meltzer), the advisability was suggested of applying the same method to the action of organisms usually found in association with bronchopneumonia. This was done by WOLLSTEIN and MELTZER (*Jour. Exper. Med.*, 1912, xvi, 126). Cultures of the streptococcus and influenza bacillus were injected through a tube deeply into a bronchus. With the streptococcus 19 dogs killed at intervals showed typical pneumonic lesions in various stages of progression and resolution. Compared to the mortality of 16 per cent., the bacteriemia, the lobar consolidation, the frequency of pleurisy, and the importance of fibrin formation in the experimental pneumococcus pneumonias of Lamar and Meltzer, these streptococcus infections showed practically no mortality, no bacteriemia, a lobular type of consolidation, no pleurisy, and an unimportant part played by fibrin. The same held true for the influenza bacillus. Wollstein and Meltzer conclude that the proper invasion of the microorganism is the determining factor in the development of pneumonia, the condition of the animal being only a minor element. Different types of pneumonia are produced by specifically different bacteria.

The Cobra Venom Hemolysis Test in Syphilis.—For about five weeks after the primary lesion in syphilis the red cells are hypersusceptible to cobra venom hemolysis in all dilutions. After this they acquire tolerance and become resistant to this hemolytic agent. In no other condition or disease does this occur. STONE and SCHOTTSTAEDT (*Arch. Int. Med.*, 1912, x, 8) have applied this test to 130 patients. The wasted corpuscles are mixed with cobra venom in dilutions of 1 to 10,000, 1 to 15,000, 1 to 20,000, and 1 to 30,000. All bloods hemolyze in 1 to 10,000; all normal bloods in all dilutions; in secondary syphilis the cells resist in dilutions above 1 to 10,000. In 4 cases of primary syphilis the test was positive (resisting hemolysis) in only 1. In 22 cases of active secondary and tertiary syphilis, 20 or 90.9 per cent. were positive. Thirty-three cases of latent secondary and tertiary syphilis yielded 87.8 per cent. positive. In 20 "clinically cured" cases the reaction was uniformly negative. Compared to the Wassermann reactions, an average positive percentage of 88.5 per cent. in 4200 cases of active syphilis, the cobra venom test gives about the same results, 85.4 per cent. positive in 1279 cases. But for latent syphilis, the positives averaged 78.1 per cent., compared to only 52.1 per cent. of Wassermann positives. The cobra venom and butyric acid tests agreed in 85.4 per cent. of 13 cases. Controls were negative.

The Wassermann Reaction Post Mortem.—H. SCHMIDT (*Deutsch. med. Woch.*, 1912, xxxviii, 802) has examined the sera of 233 cadavers for the Wassermann reaction. In many instances determinations had also been made during the life of the patient, in some cases as long as six months before death. Incomplete hemolysis was designated as a positive reaction. Of 34 luetics whose sera were examined both before and after death, corresponding results were found in 31. In older cadavers Schmidt finds that the serum may be examined in the active state. In this case a negative reaction is of considerable value, but if the reaction is positive, a control with inactivated serum must be made. In 94 per cent. of cases, lues in any form may be determined by examination of the serum obtained at autopsy. However, it must be remembered that in tumor cachexias, severe tuberculosis, and sepsis, the reaction may at times be positive, though the hemolysis is usually incomplete. Schmidt believes that the reaction possesses a relatively high value at autopsy.